performed to exclude nonconvulsive seizures. Seizures resulting from autoimmune encephalitis are caused by antibodies to surface antigens and intracellular antigenes. Conclusions: Pathogenesis proposed to involve antibody-mediated ictogenesis. Immunotherapy is effective in autoimmune encephalitis with a positive prognosis if detected early. Limbic encephalitis has been shown to have a detrimental effect on cognition, mood, and behavior. Neuropsychology is an important outcome criterion for tracking disease progression and treatment success.

Neuroimaging

P.035

Impressive MRI findings in the case of iatrogenic osmotic demyelination syndrome: case report

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Background: Osmotic demyelination syndrome (ODS) is a known complication of rapid sodium correction. While the pons is classically the most vulnerable region to osmotic shifts, other structures may also be affected. Prognosis varies from death to full recovery, yet we cannot accurately predict a patient's outcome in the acute phase. Methods: Patient chart, medical imaging, and laboratory findings were reviewed. Results: Here we present the case of a 57-year-old woman seen at our center, who was transferred from a community hospital in the context of ODS after having her serum sodium corrected from 106 mmol/L to 122 mmol/L within 24 hours. She showed depressed mental status, bulbar symptoms, ataxia and respiratory compromise, eventually requiring transfer to the intensive care unit for intubation. MRI of the brain showed striking demyelinating injury at the level of the pons. The patient was discharged to a rehabilitation facility, eventually achieving independence in activities of daily living. Conclusions: This case illustrates canonical neuroimaging findings associated with ODS. Despite extensive initial damage, long-term disability can be mitigated with appropriate care. Future studies seeking to identify specific markers imaging and clinical markers would be of interest to predict functional outcome.

P.036

Exploring changes in functional connectivity after a first unprovoked seizure: an fMRI resting state and movie-driven data study

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Background: A single unprovoked seizure occurs in up to 10% of patients, but does not necessarily develop into epilepsy. It is unclear what determines the susceptibility to develop epilepsy. Although brain network changes have been ascertained in people with epilepsy, this field has not been studied in single seizure patients. Methods: Using 7T resting-state fMRI scanning, and co-registration watching a movie for naturalistic analysis of functional connectivity (Fc). Whole brain, Fc and Brodmann areas were analyzed using phase similarity measures and graph theory. Results: Ten patients with a single unprovoked seizure and fourteen age-and sex-matched healthy controls were recruited. Baseline characteristics were similar. Fc at baseline had no differences between groups. Movie-driven analysis did not show a significant difference overall regions but we observed significant differences in default mode and Visual association cortex as well as Dorsal posterior cingulate cortex (Dorsal PCC). Conclusions: Although no network connectivity differences were found between patients and controls, when movie-driven data was analyzed, differences were seen when comparing patients in the default mode network, visual association cortex, and dorsal posterior cingulate.

Neurological Implications of Covid-19

P.037

COVID-19: Cardiac and Neurological Complications among Ontario Visible Minorities: Chinese and South Asians

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Background: This is a population-based retrospective study of cardiac and neurological complications of COVID-19 among Ontario Chinese and South Asians. Methods: From January 1, 2020 to September 30, 2020 using the last name algorithm to identify Ontario Chinese and South Asians who were tested positive by PCR for COVID-19, their demographics, cardiac, and neurological complications including hospitalization and emergency visit rates were analyzed compared to the general population. Results: Chinese (N = 1,186) with COVID-19 were found to be older (mean age 50.7 years) compared to the general population (N = 42,547) (mean age 47.6 years) ($p < 0.001$), while South Asians (N = 3,459) were younger (age of 42.1 years) ($p < 0.001$). For neurological complications, the 30-day crude rate for Chinese was 160/10,000 ($p < 0.001$); South Asians was 40/10,000 ($p = 0.526$), and general population was 48/10,000. The 30-day all-cause mortality rate was significantly higher for Chinese at 8.1% vs 5.0% for the general population ($p < 0.001$), while it was lower in South Asians at 2.1% ($p < 0.001$). Conclusions: Chinese and South Asians in Ontario with COVID-19 during the first wave of the pandemic were found to have a significant difference in their demographics, cardiac, and neurological outcomes.